compound comprising reinforcing fibers and hardening resins. Further, the underlayer may have a hardness and an elastic modulus which remain substantially constant between 70°C and 100°C. A method for making the tyre is also disclosed.--

IN THE CLAIMS:

Please cancel, without prejudice or disclaimer, claims ~~2-30,~~ and add new claims ~~31-60~~, as follows:

~~31~~. (new) A high performance tyre, comprising:

a carcass provided with at least one carcass ply;

a belt comprising two or more layers of reinforcing cords parallel to each other in a layer and crossed with respect to those of an adjacent layer, applied circumferentially on the carcass;

a radially-external layer of circumferentially-oriented reinforcing cords applied on the belt; and

a tread band comprising an underlayer and an external layer;

wherein the underlayer has a hardness which is substantially constant over a temperature range between 23°C and 100°C.

32. (new) The tyre of claim 31, wherein the hardness of the underlayer does not vary by more than 5 International Rubber Hardness Degrees (IRHD) over a temperature range between 23°C and 100°C.

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33. (new) The tyre of claim 32, wherein the hardness of the underlayer does not vary by more than 1 IRHD over a temperature range between 23°C and 100°C.

34. (new) The tyre of claim 31, wherein the hardness of the underlayer is greater than 80 IRHD at 100°C.

35. (new) The tyre of claim 34, wherein the hardness of the underlayer is greater than 85 IRHD at 100°C.

36. (new) A high performance tyre, comprising:

a carcass provided with at least one carcass ply;

a belt comprising two or more layers of reinforcing cords parallel to each other in a layer and crossed with respect to those of an adjacent layer, applied circumferentially on the carcass;

a radially-external layer of circumferentially-oriented reinforcing cords applied on the belt; and

a tread band comprising an underlayer and an external layer;

wherein the underlayer has an elastic modulus which is substantially constant over a temperature range between 70°C and 100°C.

37. (new) The tyre of claim 36, wherein the elastic modulus of the underlayer does not vary by more than 10% over a temperature range between 70°C and 100°C.

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38. (new) The tyre of claim 37, wherein the elastic modulus of the underlayer does not vary by more than 5% over a temperature range between 70°C and 100°C.

39. (new) The tyre of claim 36, wherein the elastic modulus of the underlayer is greater than 15 MPa at 100°C.

40. (new) The tyre of claim 39, wherein the elastic modulus of the underlayer is greater than 20 MPa at 100°C.

41. (new) A high performance tyre, comprising:

a carcass provided with at least one carcass ply;

a belt comprising two or more layers of reinforcing cords parallel to each other in a layer and crossed with respect to those of an adjacent layer, applied circumferentially on the carcass;

a radially-external layer of circumferentially-oriented reinforcing cords applied on the belt; and

a tread band comprising an underlayer and an external layer;

wherein the underlayer is made from an elastomer compound comprising reinforcing fibers and hardening resins.

42. (new) The tyre of claim 41, wherein the underlayer has a ratio between a 10% elongation load in a circumferential direction and a 10% elongation load in a transverse direction which is greater than 3:1.

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43. (new) The tyre of claim 41, wherein the hardening resins are based on components chosen from among one or more of the following groups: resorcinol-methylene donors, epoxides-dicarboxylic acids, epoxides-diamines, epoxides-polyols, and alcohol-diacids.

44. (new) The tyre of claim 43, wherein the methylene donors are hexamethoxymethylenemelamine (HMMM) or hexamethylenetetramine (HMT).

45. (new) The tyre of claim 41, wherein the underlayer comprises a hardening resin based on resorcinol and methylene donors in precondensed form in a quantity greater than 0.5 phr.

46. (new) The tyre of claim 41, wherein the elastomer compound comprises a hardening resin based on resorcinol and methylene donors in a form of two components, wherein a quantity of resorcinol is greater than 0.5 phr, and wherein a ratio of a quantity of methylene donors to the quantity of resorcinol is between 0.5:1 and 3:1.

47. (new) The tyre of claim 41, wherein the reinforcing fibers are chosen from among: polyamides, polyesters, polyolefins, carbon fibers, glass fibers, and polyvinyl alcohol.

48. (new) The tyre of claim 41, wherein the reinforcing fibers are aramid fibers.

49. (new) The tyre of claim 48, wherein the elastomer compound comprises a quantity of aramid fibers ranging between 3 phr and 10 phr.

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50. (new) The tyre of claim 49, wherein the elastomer compound comprises a quantity of aramid fibers ranging between 6 phr and 9 phr.

51. (new) The tyre of claim 41, wherein the underlayer has a thickness greater than 1 mm.

52. (new) The tyre of claim 51, wherein the underlayer has a thickness between 1.5 mm and 2 mm.

53. (new) The tyre of claim 51, wherein the thickness of the underlayer is variable.

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54. (new) A high performance tyre, comprising:

a carcass provided with at least one carcass ply;

a belt comprising two or more layers of reinforcing cords parallel to each other in a layer and crossed with respect to those of the adjacent layer, applied circumferentially on the carcass;

a radially-external layer of circumferentially-oriented reinforcing cords applied on the belt; and

a tread band comprising an underlayer and an external layer;

wherein the underlayer has a hardness and an elastic modulus which remain substantially constant between 70°C and 100°C.

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55. (new) A method for improving behaviour at high speeds of a high performance tyre, the tyre comprising:

a carcass provided with at least one carcass ply;

a belt comprising two or more layers of reinforcing cords parallel to each other in a layer and crossed with respect to those of an adjacent layer, applied circumferentially on the carcass; and

a radially-external layer of circumferentially-oriented reinforcing cords applied on the belt;

the method comprising the step of mounting on a periphery of the radially-external layer a tread band comprising an underlayer and an external layer,

wherein the underlayer comprises a thermostable compound.

56. (new) The method of claim 55, wherein the thermostable compound comprises reinforcing fibers and hardening resins.

57. (new) The method of claim 55, wherein the thermostable compound has an elastic modulus which is substantially constant over a temperature range between 70°C and 100°C.

58. (new) The method of claim 55, wherein the thermostable compound has a hardness which is substantially constant over a temperature range between 23°C and 100°C.

59. (new) The method of claim 55, wherein the tread band is obtained by coextruding the underlayer and the external layer.

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